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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER				
KAU, STEVEN Y				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/765,398

Applicant(s)

MIKAMI, KENJI

Examiner

STEVEN KAU

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7-9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 4/30/2008, and has been entered and made of record. Currently, claims 1, 3-5, 7-9, and 11-14 are pending, with claims 1, 3, 5, 7, 9 and 12 being amended, claims 2, 6 and 10 being canceled, and claims 13 and 14 being added.

Response to Remark/Arguments

2. Applicant's arguments, "Claims 9-12 rejected Under 35 U.S.C. § 101", Page 5, received 4/30/2008, with respect to claims 9-12 have been fully considered and are not persuasive. With respect to claim 9, currently amended, recites, "a computer program stored on a computer-readable medium, said computer program comprising: code of a discrimination step of discriminating a type of object contained in input data; and code of a processing step of applying reduction processing, which suppresses amount of colorant forming a thin line contained in an object, to a thin line contained in the object using a result of discrimination at said discrimination step, if a thin-line correction mode is turned on based upon a user instruction" (emphasis added).

Applicant is intent to claim a "computer program". In this case, the "computer program" as claimed is NOT "functional descriptive material" because the claim does not consist of data structures, but merely a set of instructions of "a discrimination step of discriminating a type of object", "a processing step of applying reduction process" and these steps are NOT capable of causing functional change in the computer. However, a

"computer-readable storage medium stored or embedded with a computer program" is a statutory functional descriptive material. Therefore, claims 9-12 rejection under 35 U.S.C. §101 still stand (MPEP 2601.01).

Applicant argues, "Applicant respectfully submits, however, that Sugimoto does not teach or suggest applying a reduction processing that suppresses the amount of colorant forming a thin line contained in an object using a discrimination by a discriminating unit, as recited in Claims 1, 5, and 9. In fact, Sugimoto appears to disclose the exact opposite, that is, not applying a reduction processing to a thin line contained in an object. For example, paragraph [0068], which is specifically referred to in the Office Action, Sugimoto discloses that the draw-attribute-based toner save level adjusting module 16 executes a process of restraining toner save with respect to a small character, a thin line and a fine dot which are less than predetermined values. Moreover, at paragraph [0155], Sugimoto discloses that the brightness of colors used, not the amount of toner, is reduced when forming thin lines. Thus, Sugimoto discloses the opposite of Applicant's claimed suppression of amount of colorant forming a thin line contained in an object: Sugimoto discloses that amount of toner is not suppressed in thin lines.

Applicant also notes the disclosure at paragraph [0069] of Sugimoto is not equitable to Applicant's claimed suppression of colorant. In Claim 1, 5, and 9 of the present application, the suppression of colorant is based on a result of discrimination of a type

of object. On the other hand, Sugimoto, at paragraph [0069] discloses a toner save level adjustment module 17 which operates based on print-resolution, not on the type of object", page 7, 4/30/2008.

In re, the examiner respectfully disagrees. The Sugimoto's disclosure, as a whole, is about toner control for printing. In that, Sugimoto discloses two embodiments, teaching toner save level control processes, or toner reduction processes for printing, or suppressing amount of colorants to form lines with various line width (**Figures 1-9 & col 5, line 32 through col 6 line 33, and Figures 10-14, & col 13, line 47 through col 14, line 67 for embodiments 1 & 2, respectively**). Sugimoto discloses that amount of toner is suppressed in thin lines. For example, "the graphic having the line width equal to or larger than 1 point but smaller than 2 points is thereby color-converted in such a direction as to slightly relieve the toner save", (col 13, lines 13 through col 14, line 3). Thus, the rejection of independent claims 1, 5 and 9 under 35 U.S.C. §102(e) still stands.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The examiner also references the applicant to the claims rejection section below for the explanation on how the prior art references read on the amended claims.

Claim Objections

3. Claims 1, 5, and 9 are objected to because of the following informalities: with respect to claim 1, limitation recites, ".....if a thin-line correction mode is turned on...."

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(emphasis added). The examiner recommends to change the underlined phrase to "...when a thin correction mode is turned on..." (emphasis added) to avoid any ambiguity issues in the claim.

Appropriate correction is recommended.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 9-12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Claims 9-12 are directed to a computer program. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. With respect to claim 9, recites, "a computer program stored on a computer-readable medium, said computer program comprising: code of a discrimination step of discriminating a type of object contained in input data; and code of a processing step of applying reduction processing, which suppresses amount of colorant forming a thin line contained in an object, to a thin line contained in the object using a result of discrimination at said discrimination step, if a thin-line correction mode is turned on based upon a user instruction" (emphasis added). The original disclosure lack of information, e.g. the computer program codes, for enabling one to make and use the

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invention as claimed. Both computer hardware and software must be sufficiently disclosed (MPEP 2161.01).

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 9-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 9-12 are drawn to "a computer program", which can be characterized as either "functional descriptive material" or "nonfunctional descriptive material". Since the computer program comprising "a discrimination step of discriminating a type of object", "a processing step of applying reduction process. Therefore, it is being considered as "nonfunctional descriptive material" because "a computer program" per se in the claims can merely be a set of instructions.

Also, considering the claim as "functional descriptive material" imparts with functionality, but not being employed as a computer component (or other physical structures), is considered not statutory. "In contrast, a claimed computer-readable medium encoded with a computer program... is thus statutory." (See *"Interim Guideline for Examination of Patent Application for Patent Subject Matter Eligibility"*, ANNEX IV, Page 53, First Paragraph;).

Therefore, both types of "descriptive material" are nonstatutory when claimed as descriptive material per se (See "Interim Guideline for Examination of Patent

Application for Patent Subject Matter Eligibility", ANNEX IV, Page 50, Second Paragraph;). As well as the claimed program is not necessarily a computer program, and is not encoded or embodied on a computer readable medium, there is no structural and functional interrelationships, thus, the claim is considered non-statutory.

While functional descriptive material may be claimed as a statutory product (i.e., a "manufacture") when embodied on a tangible computer readable medium, a "computer programming steps" per se does not fall within any of the four statutory classes of 35 U.S.C. §101. Furthermore, a "computer programming steps" is not a "machine", "composition of matter" or a "manufacture" because these statutory classes "relate to structural entities and can be grouped as 'product' claims in order to contrast them with process claims." (1 D. Chisum, Patents § 1.02 (1994)). Machines, manufactures and compositions of matter are embodied by physical structures or a tangible material, whereas a "computer programming steps" has neither a physical structure nor a tangible material. That is, a "computer programming steps" is not a "machine" because it has no physical structure, and does not perform any useful, concrete and tangible result. Likewise, a "computer programming steps" is not a "composition of matter" because it is not "matter", but rather a form of conceptual idea. Finally, a "computer programming steps" is not a "manufacture" because all traditional definitions of a "manufacture" have required some form of physical structure, which a claimed "computer program steps" does not have.

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A "manufacture" is defined as "the production of articles for use from raw materials or prepared materials by giving to these materials new forms, qualities, properties, or combinations, whether by hand-labor or by machinery." *Diamond v. Chakrabarty*, 447 U.S. 303, 308, 206 USPQ 193, 196-97 (1980) (quoting *American Fruit Growers, Inc. v. Brogdex Co.*, 283 U.S. 1, 11, 8 USPQ 131, 133 (1931)).

Therefore, a computer program, or signal or instruction, not being employed as a computer component (or other physical structures), is considered non-statutory because it is a form of conceptual idea, in the absence of any physical structure or tangible material, that does not fall within any of the four statutory classes of 35 U.S.C. §101. (MPEP 2601.1)

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1, 4, 5, 7, 8, 9 and 11-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Sugimoto (US 7,298,522).

Regarding claim 1.

Sugimoto discloses an image forming apparatus (**Fig. 1, col 4, lines 38-50**) comprising: a discrimination unit (**e.g. Image Distinguishing Module of Fig. 2**) for

discriminating a type of object (such as character/graphic) contained in input data (col 5, lines 32-53); and a processing unit (e.g. a CPU of host computer 1 of Fig. 1, col 4, lines 45-50) for applying reduction (e.g. toner saving) processing (e.g. toner save level selection modules 13-15, toner save level adjusting modules 15-17, col 5, line 63 through col 6, line 33), which suppresses amount of colorant (e.g. adjusting toner save level for printing, col 6, lines 6-12) forming a thin line contained in an object (e.g. Sugimoto discloses a drawing-attribute-based toner save level adjusting module in accordance with line width of an object, i.e. graphic, col 6, lines 13-33 and col 9, line 66 through col 10, line 2), to a thin line contained in the object (e.g. graphic) using a result of discrimination by said discrimination unit (e.g. Sugimoto discloses embodiments 1 & 2, i.e. Figs 2 & 6, and Fig 14, respectively, for discriminating, or judging or determining toner save level in accordance with line width, col 13, lines 46 through col 14, line 16), a user instruction is that an object is a graphic (e.g. Sugimoto discloses a process, including hardware, i.e. of Fig. 1 and software, i.e. a set of modules of Fig. 2, for toner save functions, including graphic, according to user's specification, col 5, line 28 through col 6, line 33).

Regarding claim 3.

Sugimoto discloses wherein said processing unit does not execute application of the reduction processing to an object of a certain type (Figs 6 & 7, col 8, lines 44-52).

Regarding claim 4.

Sugimoto discloses wherein said discrimination unit discriminates the type of object based upon an instruction contained in image data described in page description language (col 5, lines 47-53).

Regarding claims 5 and 9.

Claims 5 and 9 recite identical features as claim 1, except claim 5 is a method claim and 9 is a computer program product claim. Thus, arguments similar to that presented above for claim 1 are also equally applicable to claims 5 and 9.

Regarding claims 7 and 11.

Claims 7 and 11 recite identical features as claim 3, except claim 7 is a method claim and 11 is a computer program product claim. Thus, arguments similar to that presented above for claim 3 are also equally applicable to claims 7 and 11.

Regarding claims 8 and 12.

Claims 8 and 12 recite identical features as claim 4, except claim 8 is a method claim and 12 is a computer program product claim. Thus, arguments similar to that presented above for claim 4 are also equally applicable to claims 8 and 12.

Regarding claim 13.

Sugimoto discloses wherein said reduction processing is applied to a thin line having a designated color (e.g. **providing Sugimoto's teaching of printing thin lines of width between 1 to or larger than 1 point, but smaller than 2 point of graphic and color conversion mode selection module selects a color conversion module corresponding to toner save level, this limitation is anticipated by Sugimoto; col 6, lines 32-41 and col 13, line 47 through col 14, line 16).**

Regarding claim 14.

Sugimoto discloses wherein the colorant is toner (**Sugimoto discloses a color printer of Fig.1 which the colorant is a toner, Figs 15-16, col 16, line 53 through col 17, line 9).**

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Kau whose telephone number is 571-270-1120 and fax number is 571-270-2120. The examiner can normally be reached on Monday to Friday, from 8:30 am -5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Steven Kau/
Examiner, Art Unit 2625
7/17/2008

/King Y. Poon/
Supervisory Patent Examiner, Art
Unit 2625